**Section 1. Identification of the Substance/Mixture and of the Company/Undertaking**

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>MA 440 Adhesive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplier:</td>
<td>CSNRI</td>
</tr>
<tr>
<td>Emergency Phone Number:</td>
<td>800.424.9300 (CHEMTREC)</td>
</tr>
<tr>
<td></td>
<td>+1 703.741.5970 (Outside the US)</td>
</tr>
<tr>
<td>Product Description:</td>
<td>Adhesive</td>
</tr>
<tr>
<td>Product Use:</td>
<td>Intended to repair pipes</td>
</tr>
</tbody>
</table>

**Section 2. Hazards Identification**

**Classification of the substance or mixture**

<table>
<thead>
<tr>
<th>Classification of the mixture in accordance with Regulation (EC) 1272/2008 CLP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable Liquid – Category 2</td>
</tr>
<tr>
<td>Skin Irritation – Category 2</td>
</tr>
<tr>
<td>Skin Sensitization – Category 1</td>
</tr>
<tr>
<td>Eye Irritation – Category 2</td>
</tr>
<tr>
<td>Specific Target Organ Toxicity, Single Exposure – Category 3</td>
</tr>
</tbody>
</table>

**Hazard pictograms:**

- ![](image)
- ![image]

**Signal word:** Danger

**Hazard statements:**

- H225 - Highly flammable liquid and vapor.
- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H319 - Causes serious eye irritation.
- H335 - May cause respiratory irritation.

**Precautionary statements:**

- P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P370+P378 - In case of fire: Use dry chemical, carbon dioxide to extinguish small fires. Use water for large fires.

**Other hazards:** No information available.

**Section 3. Composition/Information on Ingredients**

**Substances:** N/A
Mixtures:

<table>
<thead>
<tr>
<th>Common Name</th>
<th>CAS No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene-Butadiene- Styrene Polymer</td>
<td>9003-55-8</td>
<td>17.1-18.9</td>
</tr>
<tr>
<td>p(BD/MMA/STY)</td>
<td>25053-09-2</td>
<td>7.9 - 9.0</td>
</tr>
<tr>
<td>Methyl Methacrylate Monomer</td>
<td>80-62-6</td>
<td>59.7-66</td>
</tr>
<tr>
<td>Paraffin waxes (petroleum), clay-treated</td>
<td>64742-43-4</td>
<td>0.1-1</td>
</tr>
<tr>
<td>Diisodecyl adipate</td>
<td>27178-16-1</td>
<td>4.7-5.2</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

Description of first aid measures:

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.

**Skin Contact:** Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

**Ingestion:** If swallowed, do NOT induce vomiting. Provide a glass of water to dilute the material in the stomach. If vomiting occurs naturally, have the person lean forward to reduce the risk of aspiration. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Most important symptoms and effects, both acute and delayed:

**Eye:** Can cause moderate irritation, burning sensation, tearing, redness, and swelling. Overexposure may cause lacrimation, conjunctivitis, corneal damage and permanent injury.

**Skin:** Can cause skin irritation; itching, redness, rashes, hives, burning, and swelling. Allergic reactions are possible. May cause skin sensitization, an allergic reaction, which becomes evident on re-exposure to this material.

**Inhalation:** Respiratory tract irritant. High concentration may cause dizziness, headache, and anesthetic effects.

**Ingestion:** Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.

**Chronic health effects:** Prolonged skin contact may lead to burning associated with severe reddening, swelling, and possible tissue destruction.

**Signs/Symptoms:** Overexposure can cause headaches, dizziness, nausea, and vomiting.


**Aggravation of pre-existing conditions:** Individuals with pre-existing skin disorders, asthma, allergies or known sensitization may be more susceptible to the effects of this product.

**Indication of any immediate medical attention and special treatment needed, if necessary:** No information available.

Section 5. Fire Fighting Measures

**Suitable extinguishing media:** Use carbon dioxide (CO₂) or dry chemical.

**Unsuitable extinguishing media:** Water may cause frothing.

**Special hazards arising from the mixture:** Sealed containers at elevated temperatures may rupture explosively and spread fire due to polymerization.

**Special protective actions for fire-fighters:** Evacuate area of unprotected personnel. Use cold water spray to
cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water. As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.

**Section 6. Accidental Release Measures**

**Personal precautions, protective equipment and emergency procedures:**
- **For non-emergency personnel:** Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
- **For emergency responders:** Use appropriate Personal Protective Equipment (PPE). Use gloves and safety glasses.

**Environmental precautions:** Avoid runoff into storm sewers, ditches, and waterways.

**Methods and material for containment and cleaning up:** Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Collect spill with a non-sparking tool. Place into a suitable container for disposal. Clean up spills immediately observing precautions in the protective equipment section. After removal, flush spill area with soap and water to remove trace residue. Ventilate area. Use proper personal protective equipment as listed in section 8.

**Other Precautions:** Pump or shovel to storage/salvage vessels. Add inhibitor to prevent polymerization.

**Section 7. Handling and Storage**

**Precautions for safe handling:** Use with adequate ventilation. Avoid breathing vapor, aerosol or mist. Material will accumulate static charges which may cause an electrical spark (ignition source). Use proper grounding procedures. Do not reuse containers without proper cleaning or reconditioning. Material is flammable, eliminate ignition sources. Vapors can form an ignitable mixture with air. Vapors can flow along surfaces to distant ignition sources and flash back.

**Hygiene practices:** Wash hands thoroughly after handling.

**Conditions for safe storage, including any incompatibilities:** Store in a cool, dry, well ventilated area away from sources of heat, combustible materials, direct sunlight, and incompatible substances. Keep container tightly closed when not in use.

**Section 8. Exposure Controls/Personal Protection**

**Control parameters:**

**Exposure guidelines:**

<table>
<thead>
<tr>
<th></th>
<th>Methyl methacrylate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Limit value - Eight hours</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td>ppm</td>
</tr>
<tr>
<td>EU</td>
<td>50</td>
</tr>
<tr>
<td>Denmark</td>
<td>25</td>
</tr>
<tr>
<td>France</td>
<td>50</td>
</tr>
<tr>
<td>Italy</td>
<td>50</td>
</tr>
</tbody>
</table>

GESTIS INTERNATIONAL LIMIT VALUES, by IFRA Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung.

**Appropriate engineering controls:** Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards e.g. international standard NFPA 654. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

Individual protection measures:

**Eye/Face Protection:** Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.

**Skin Protection Description:** Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer’s data for permeability data.

**Respiratory Protection:** A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.

---

**Section 9. Physical and Chemical Properties**

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Physical State:</th>
<th>Paste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Off-white</td>
</tr>
<tr>
<td>Odor:</td>
<td>Fragrant</td>
</tr>
<tr>
<td>Melting Point:</td>
<td>-54°F (-47.7°C)</td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>&gt;212°F (100°C)</td>
</tr>
<tr>
<td>Lower Flammable/Explosive Limit:</td>
<td>1.7%</td>
</tr>
<tr>
<td>Upper Flammable/Explosive Limit:</td>
<td>12.5%</td>
</tr>
<tr>
<td>Flash Point:</td>
<td>50°F (10°C)</td>
</tr>
<tr>
<td>Flash Point Method:</td>
<td>Tag closed cup. (TCC)</td>
</tr>
<tr>
<td>Solubility:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapor Pressure:</td>
<td>28 mm Hg @68°F</td>
</tr>
<tr>
<td>Vapor Density:</td>
<td>3.5 (air = 1)</td>
</tr>
<tr>
<td>Specific Gravity:</td>
<td>0.93-1.05</td>
</tr>
<tr>
<td>Percent Volatile:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>3 (butyl acetate = 1)</td>
</tr>
<tr>
<td>Percent Solids by Weight:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Molecular Formula:</td>
<td>Mixture</td>
</tr>
<tr>
<td>Molecular Weight:</td>
<td>Mixture</td>
</tr>
<tr>
<td>Ignition Temperature:</td>
<td>789°F</td>
</tr>
<tr>
<td>VOC Content:</td>
<td>&lt;50 g/L mixed</td>
</tr>
</tbody>
</table>

---

**Section 10. Stability and Reactivity**

**Reactivity:** If the storage conditions are satisfied, does not produce dangerous reactions.

**Chemical stability:** Stable under standard normal conditions.

**Possibility of hazardous reactions:** None under normal processing.

**Hazardous Polymerization:** Polymerization may occur under certain conditions.

**Conditions to avoid:** Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing...
conditions. Oxygen-free atmospheres or inert gas blanketing. Freezing conditions. Material can soften paint and rubber.

**Incompatible Materials:** Oxidizing agents (e.g., peroxides, nitrates), reducing agents, acids, bases, azo-compounds, catalytic metals (e.g., copper, iron), halogens. Free radical initiators. Oxygen scavengers.

**Hazardous decomposition products:** No information available.

### Section 11. Toxicological Information

**Information on the likely route of exposure:**
- **Inhalation:** May cause respiratory irritation.
- **Eye Contact:** May cause eye irritation.
- **Skin Contact:** May irritate the skin. May cause allergic skin reaction.
- **Ingestion:** May be harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics:**
- **Sensitization:** No information available.
- **Mutagenic Effects:** No information available.
- **Carcinogenic Effects:** No information available.
- **Reproductive Toxicity:** No information available.
- **Developmental Toxicity:** No information available.
- **STOT - single exposure:** No information available.
- **STOT - repeated exposure:** No information available.
- **Aspiration Hazard:** No information available.

**Delayed and immediate effects and also chronic effects from short and long term exposure:**
- **Short term exposure:** No specific data available.
- **Long term exposure:** No specific data available.

**Numerical measures of toxicity:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Eye</th>
<th>Dermal</th>
<th>Inhalation</th>
<th>Oral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene-Butadiene-Styrene Polymer</td>
<td>Rabbit - 500 mg/24H [Mild]</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>(RTECS) (standard Draize test)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methyl Methacrylate Monomer</td>
<td>Rabbit - 150 mg [Not reported]</td>
<td>Rabbit LD50 - Lethal dose, 50% kill: &gt;5 gm/kg [Skin and Appendages – Dermatitis (After systemic exposure)] (RTECS)</td>
<td>Rat LC50 - Lethal concentration, 50% kill: 78000 mg/m³/4H [Details of toxic effects not reported other than lethal dose value] (RTECS)</td>
<td>Rat LD50 - Lethal dose, 50% kill: 7872 mg/kg [Behavioral - Muscle weakness Behavioral - Coma Lungs, Thorax, or Respiration - Respiratory depression] (RTECS)</td>
</tr>
<tr>
<td>Diisodceyl adipate</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

[Details of toxic effects not reported]
Section 12. Ecological Information

Ecotoxicity: No ecotoxicity data was found for the product.
Environmental Fate: No environmental information found for this product.
Persistence and degradability: No information available.
Bioaccumulative potential: No information available.
Mobility in soil: No information available.
Results of PBT and vPvB: No information available.
Other adverse effects: No information available.

Section 13. Disposal Considerations

Disposal Methods: Waste and empty containers must be handled and eliminated according to current, local/national legislation. According to DIRECTIVE 2008/98/EC the waste resulting is classified as H 3, according to Annex III. Local and national waste management legislation for the particular form of containment used must be complied with.

Section 14. Transport Information

ADR/IMDG/ICAO/IATA:
UN Number: 1247
UN Proper shipping name: Methyl methacrylate monomer
Transport hazard class: 3
Packing group: II
Environmental hazards: No

Transport in bulk according to Annex II of MARPOL and the IBC Code: N/A

Section 15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture:

EU REGULATIONS
• Regulation (EC) 1272/2008 on the classification, labeling and packaging of substances and mixtures (CLP Regulation)
• Directive (EC) 98/2008 on waste
• ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road

Restrictions of occupation
Order of Occupational Safety and Health at Work No. 507 of 17 May 2011, as amended, Environmental Protection Agency of Denmark.
GESTIS INTERNATIONAL LIMIT VALUES, by IFRA Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung.

AGENCIES
ECHA: European Chemicals Agency.

Chemical safety assessment: No information available.

**Section 16. Other Information**

**Abbreviations and acronyms used:**
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ELV: Exposure limit value.
EC50: Half maximal effective concentration.
PPE: Personal protection equipment.
LC50: Lethal concentration, 50%.
LD50: Lethal dose, 50%.

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